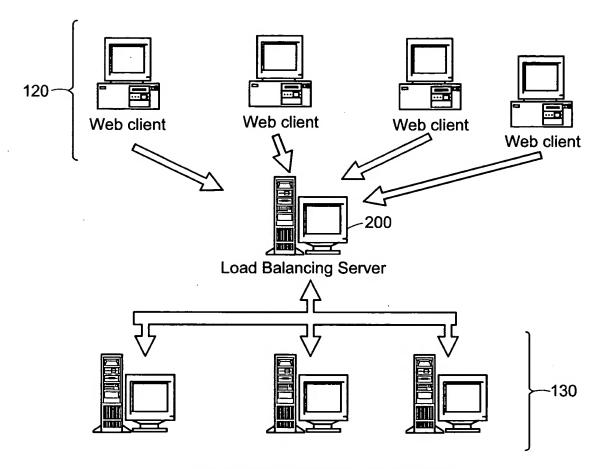


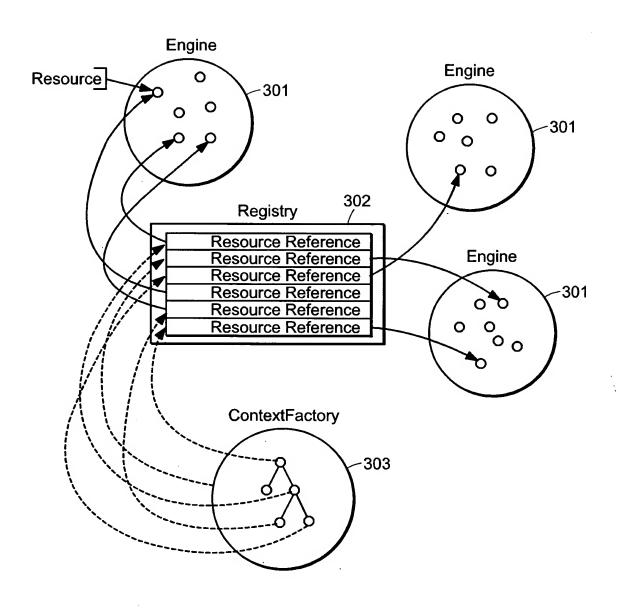
FIG. 1C



Machine Scalability Using Load Balancing

FIG. 2

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Engine/Registry Model

FIG. 3

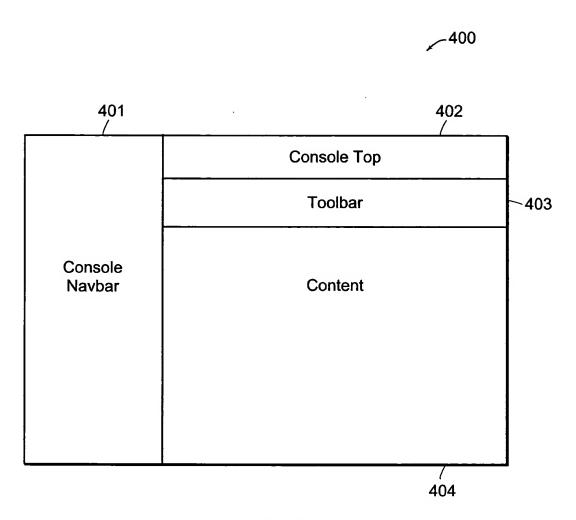


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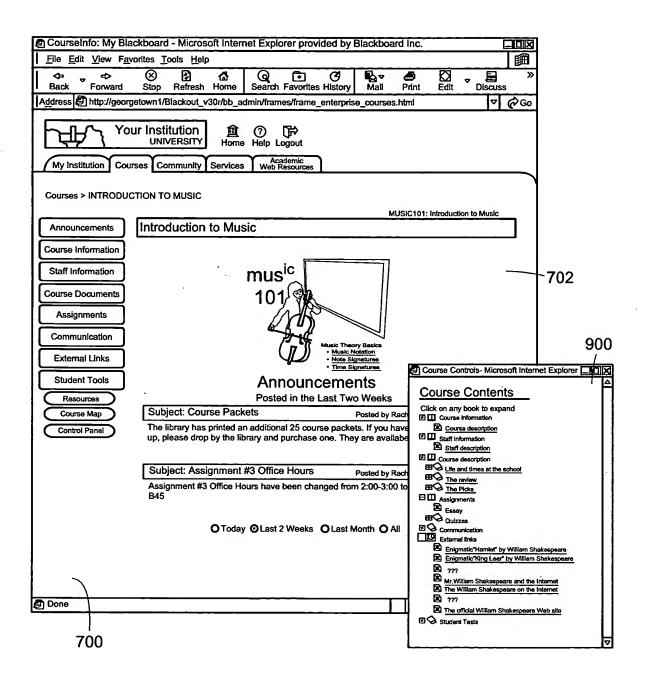


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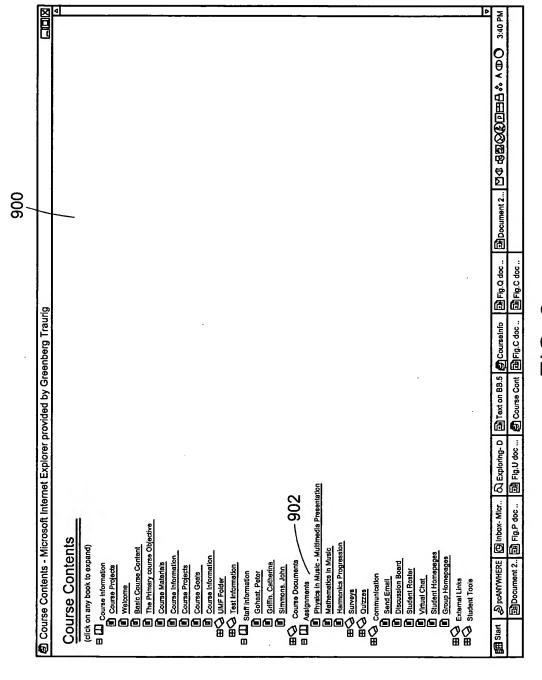


FIG. 9

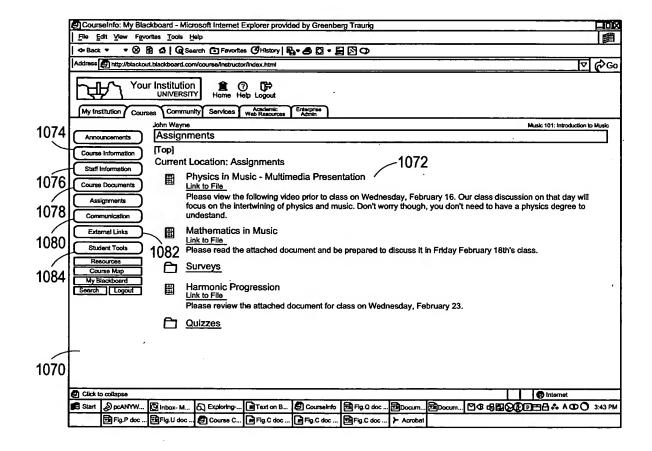


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FIG. 11

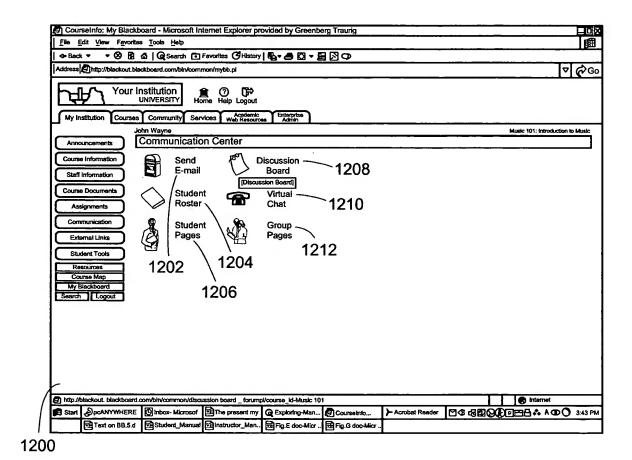


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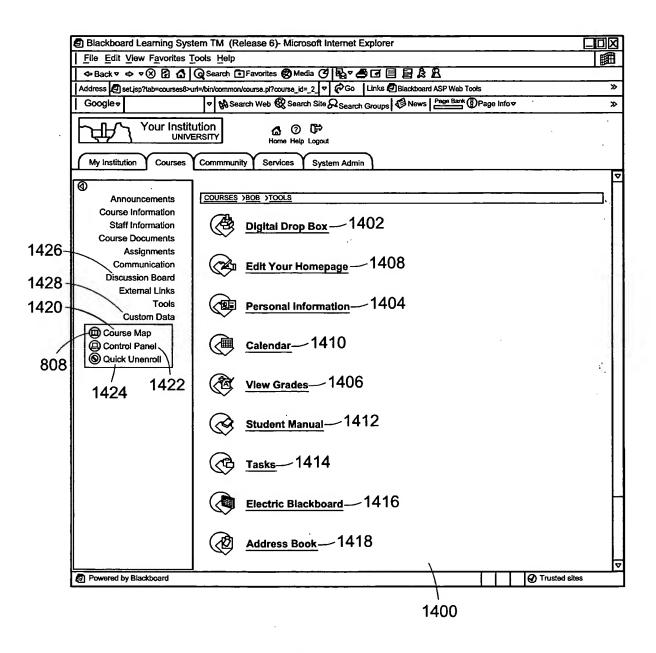


FIG. 14

Student Tools John Wayne

Music 101: Introduction to Music

Student Drop Box

Use your student drop box to submit files to your instructor. Also, your instructor can return your files to you with comments attached.

/1508 Current Files in your DropBox Note: If you want to save a file, right click on the Link Name and choose Save Link As

Status none File Size none **Link Name** none 1510 File Name none

[Remove Files]



Click the Browse button to select the file to attach from your computer.

Be sure to specify a linkname for your file,

File to Upload:

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(Example: Homework One, Assignment One)

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FIG. 15

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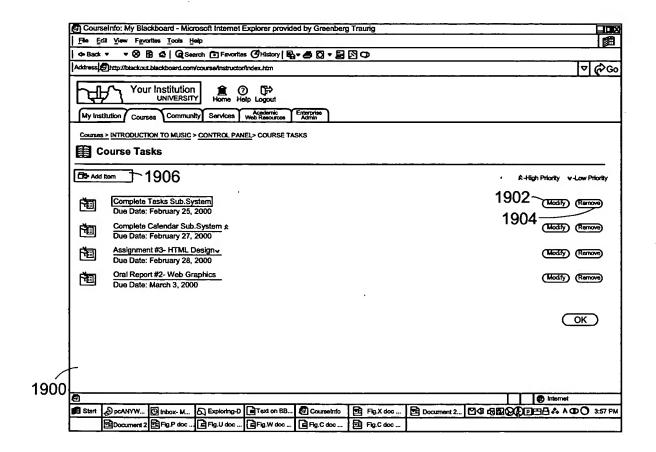


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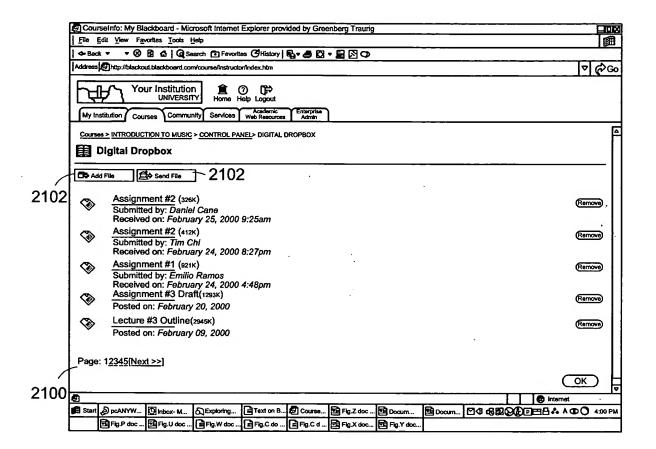


FIG. 21

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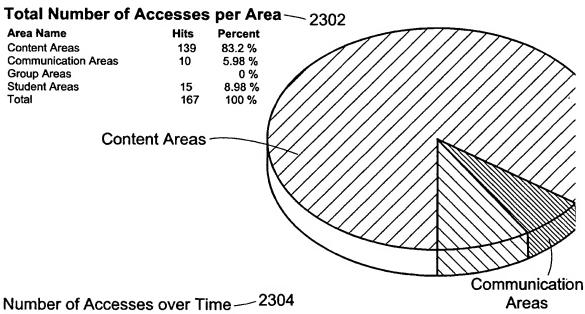
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Course Statistics

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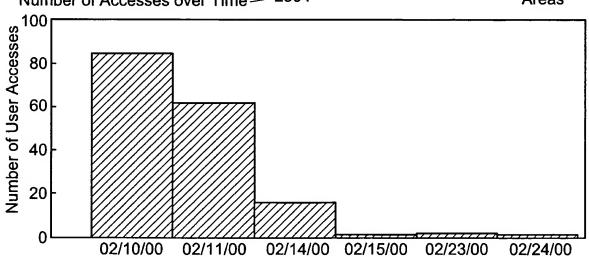
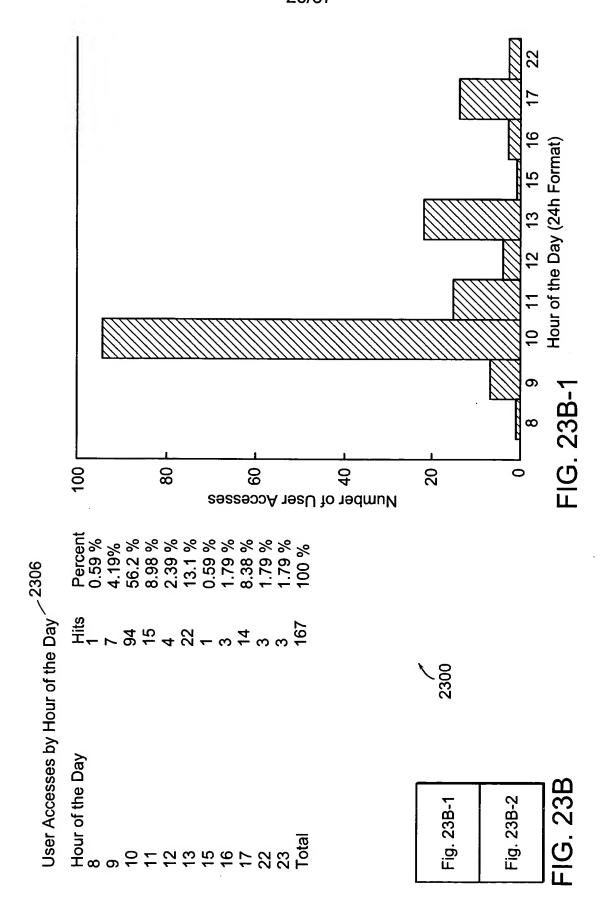
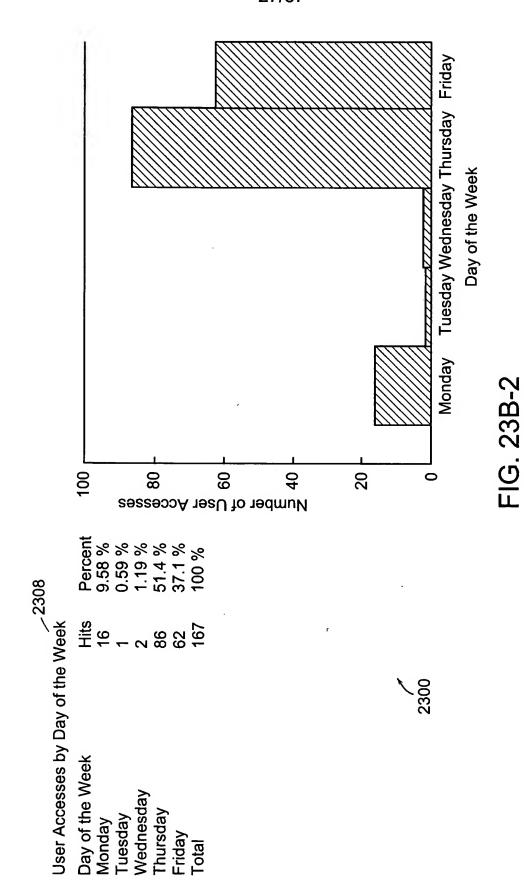


FIG. 23A





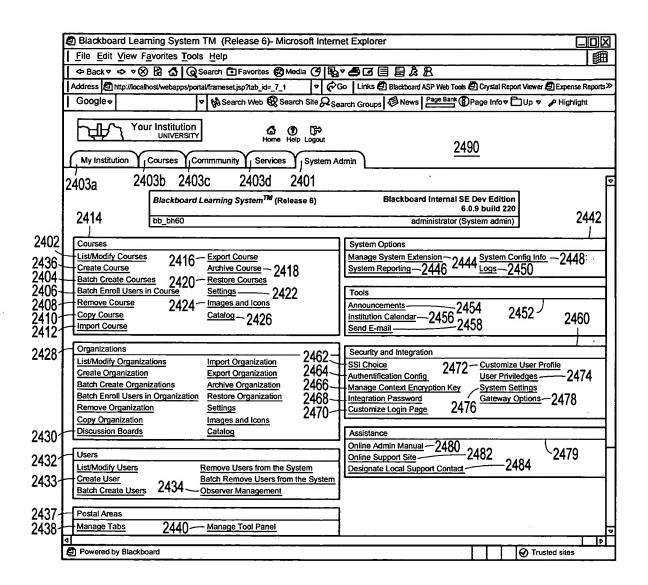
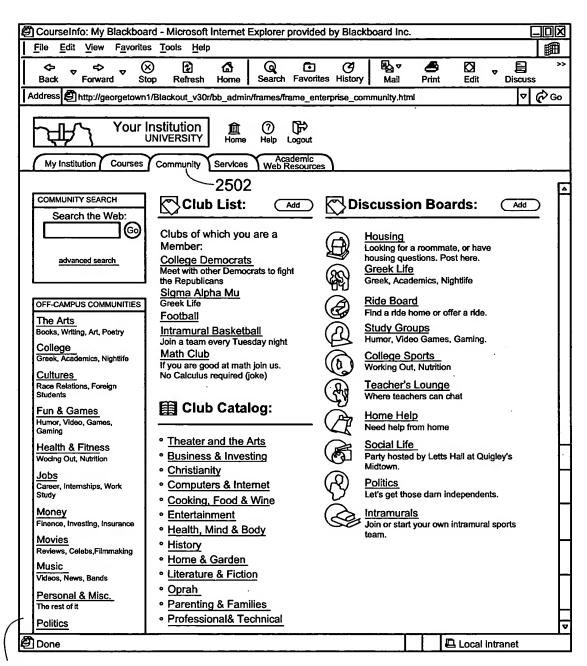


FIG. 24



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FIG. 25

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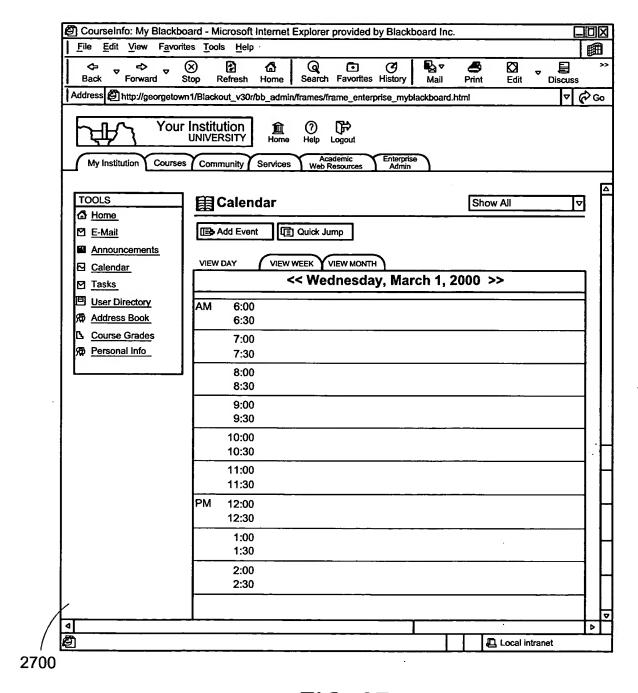
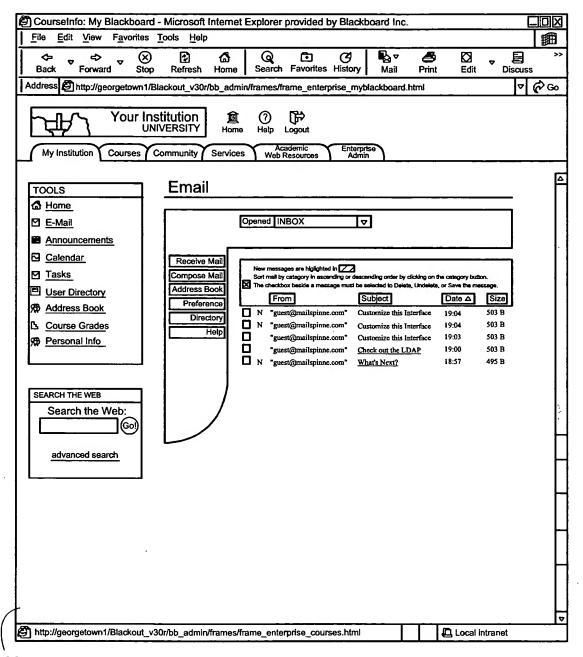


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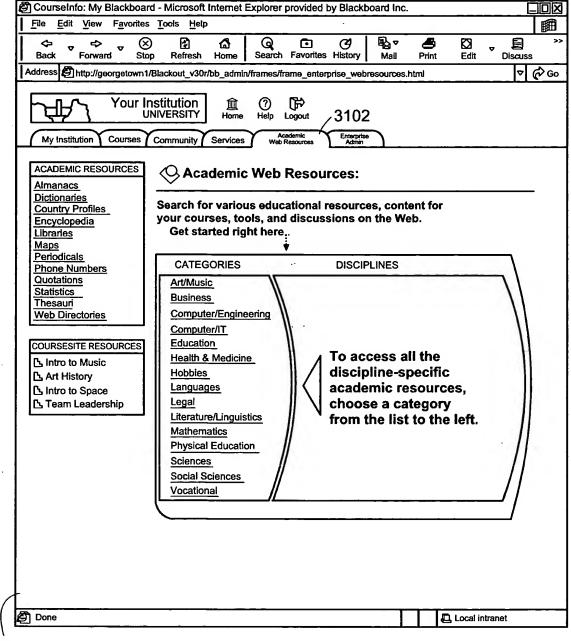
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FIG. 30A

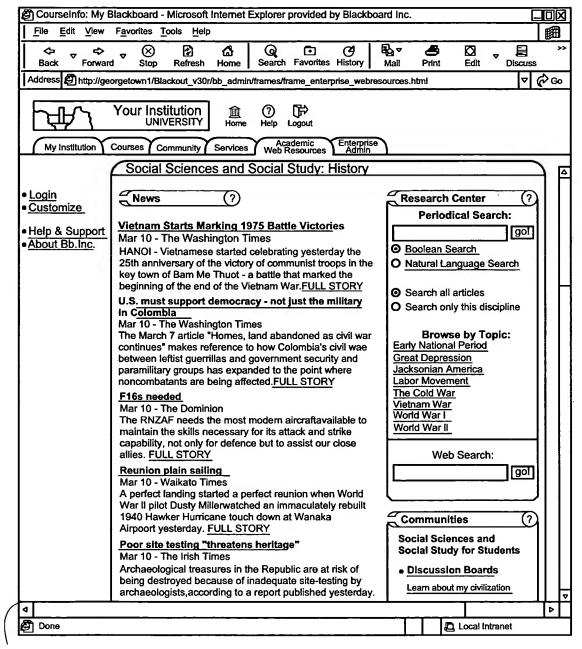
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FIG. 30B



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FIG. 31



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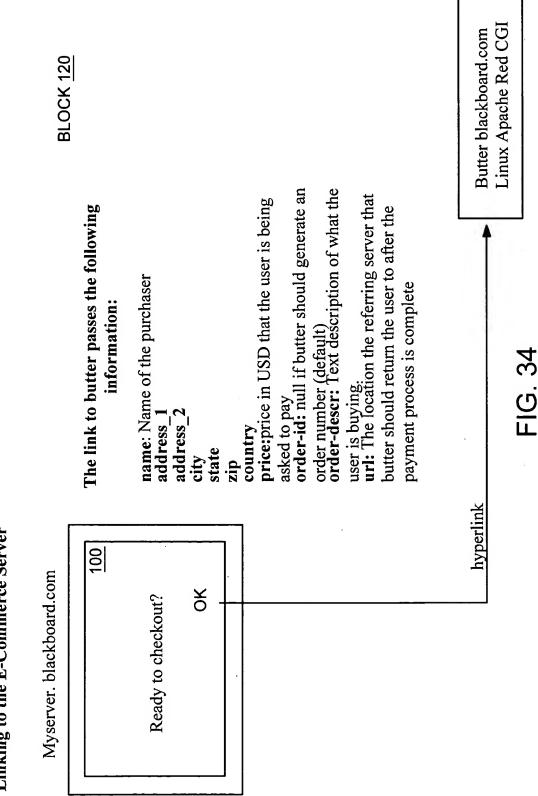
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FIG. 33A

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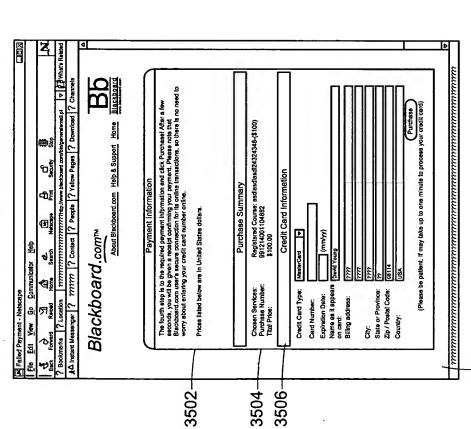
FIG. 33B



Linking to the E-Commerce Server

First E-Commerce Screen Display

Butter.blackboard.com



Accepts VISA, MC, Diner's Club, JCB and Carte Blanche (but not Amex)

Whatever user info is available is populated from the data passed from the previous page.

The unique order number displayed is dynamically generated by the server.

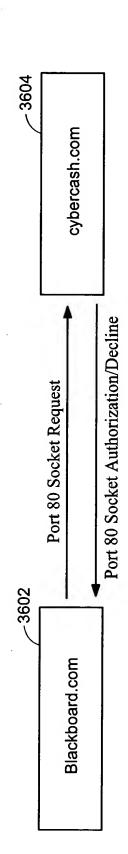
The Chosen services and price displayed are passed in from the previous screen.

The look and feel of this plate (and all butter ecommerce pages) can be modified by an HTML template. This template is selected as one of the script parameters.

FIG. 35

3500

Authorization Process



• The authorization process takes a minute or so.

• If the card is rejected, a page like the one at right is displayed.

• If the card is accepted, the payment goes through, and the page on the next slide is shown.

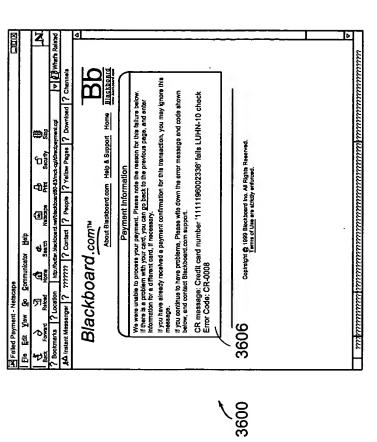
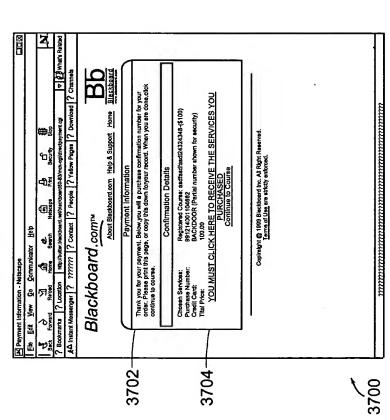


FIG. 36

Second E-Commerce Screen Display

Butter.blackboard.com



Payment is authorized and queued at Cybercash, Inc for processing.

The payment will go through and appear in Blackboard's Cybercash account within 12 hours.

There is no way that the user can back out at this point without Blackboard issuing a manual refund.

No services are provided yet. The user must follow the link at the bottom of the page, or he will receive nothing for his money.

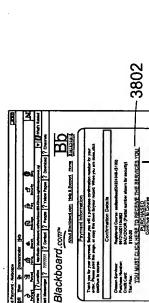
All links on this page are disabled except the one that says:YOU MUST CLICK HERE". This prevents users from failing to get their orders filled.

A authorization code is calculated by the script as a secure hash of the purchase price, the order id, and a secret number.

FIG. 37

Returning to the Originating Server

Butter.blackboard.com



• The link at the bottom of the page points back to the referring server using the location passed in the URL parameter to the first butter script.

• The authorization code, the order_id and a subset of the credit card digits (show_card) are passed back as parameters.

• The authorization code should be checked upon return by making an identical hash calculation. If the two hash values match, the order should be fulfilled, otherwise, and error should be shown.

myserver.blackboard.com

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FIG. 39

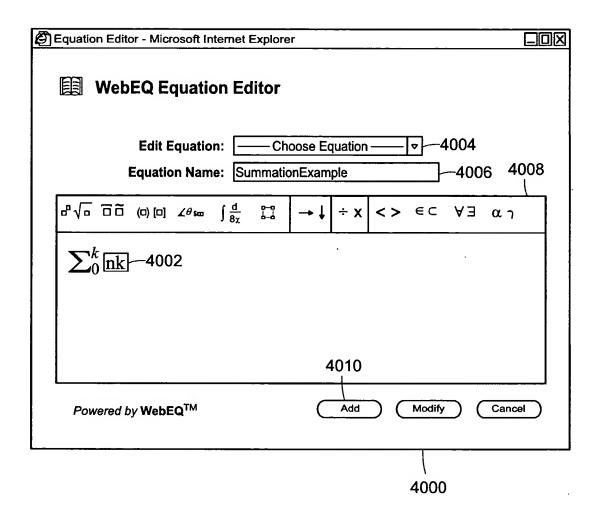


FIG. 40

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RENDERED DATA

FIG. 41

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FIG. 42

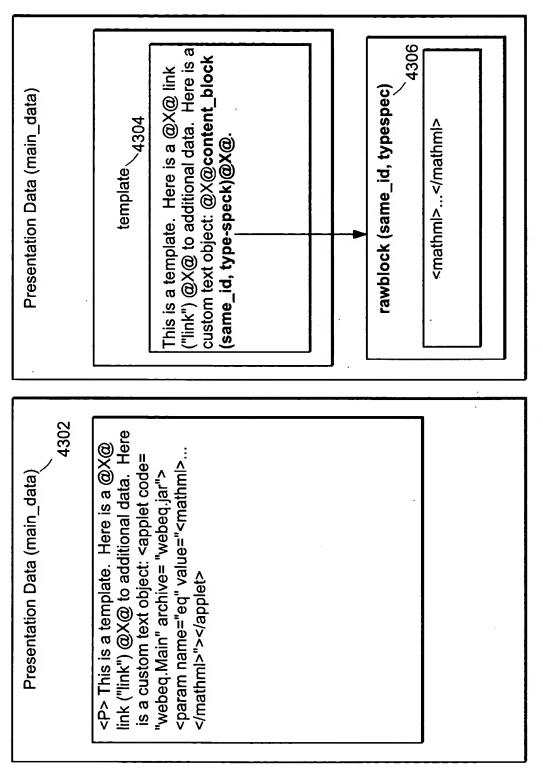


FIG. 43

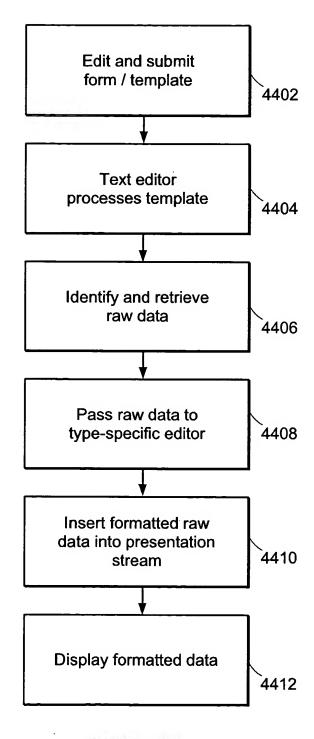
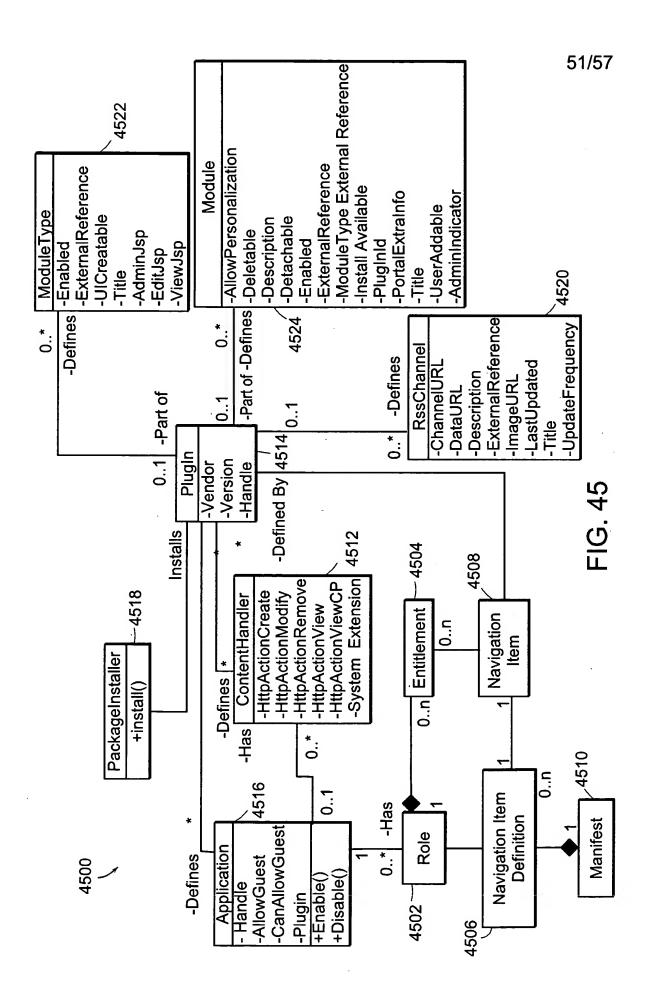


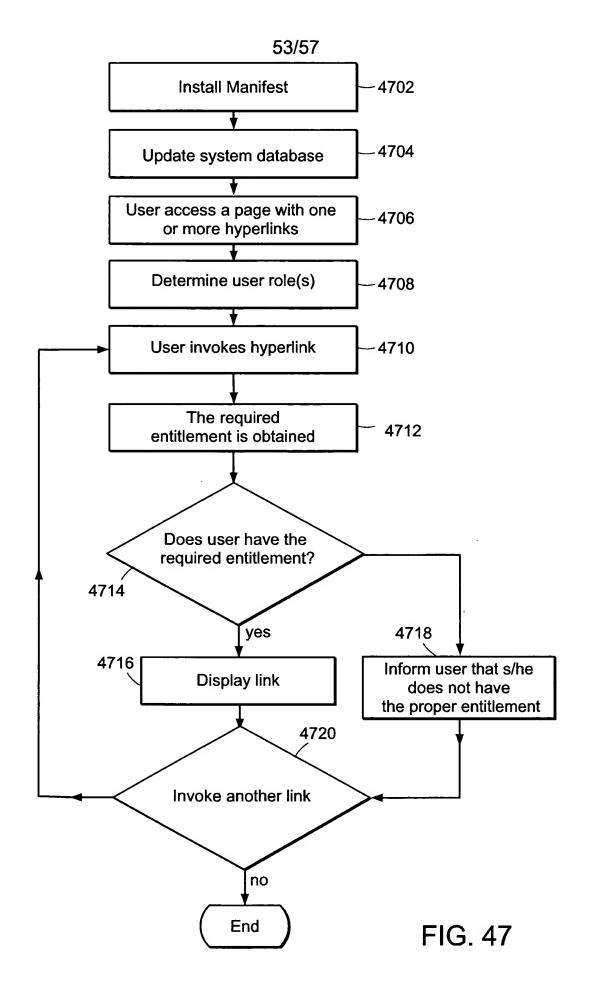
FIG. 44



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FIG. 46



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FIG. 48

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FIG. 49

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FIG. 50

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FIG. 51